

ABSTRACT

Systems and methods for immobilizing a target such as a human or animal with a stimulus signal coupled to the target via electrodes provide the stimulus signal in accordance with a strike stage, a hold stage, and a rest stage. Systems include a launch device and separate projectile, where the projectile includes a battery, a waveform generator, and electrodes. The strike stage and hold stage may include pulses at a pulse repetition rate, for example, from 10 to 20 pulses per second, each pulse delivering a predetermined amount of charge, for example, about 100 microcoulombs at less than about 500 volts peak. The hold stage may continue immobilization at a lesser expenditure of energy compared to the strike stage. Because the strike stage and hold stage may immobilize by interfering with skeletal muscle control by the target's nervous system, a rest stage may allow the target to take a breath.